

BACKGROUND OF THE STUDY:

The articular eminence is one of the prominent features of the cranial component of the temporomandibular joint. It also dictates the path and type of condylar disk complex movement. Although the articular eminence is an anatomical structure belonging to the cranium, it is exposed to functional load arising from masticatory forces through structures within TMJ, and these loads influence the morphological shape of it. The analysis of complex, curved surfaces and angles which form the TMJ are rather complex. It is the eminence and not the fossa which is loaded by reaction forces developed among articular surfaces.

Coronoid process is the anterior bony projected part of ramus of mandible. It gives attachment to temporalis muscle in the apex, medial surface and anterior part of lateral surface. The coronoid morphology is also influenced by functional changes with the degree of temporalis muscle attachment.

AIM:

To assess the age related changes in the slopes of the articular eminence and coronoid morphology using orthopantomograms.

MATERIALS AND METHODS:

This study was carried out with images acquired from digital orthopantomograms. The radiograph with tracing sheet attached is viewed in a radiographic illuminator for marking the required landmarks with reference to the Frankfort horizontal plane. The Angles α , β , γ , a, b, & c are measured manually using

protractors. The values of the following angles are plotted according to the different age categories in the data sheet in Microsoft excel.

RESULTS:

This study indicate that the posterior slope of eminence increases with age, also the fossa deepens as age increases and the eminence vertex is also resorbing. The results obtained from the study revealed there is deposition in posterior slope and resorption in anterior slope of the coronoid.

CONCLUSION:

There are age related changes in articular eminence slopes and coronoid morphology. The biomechanical forces are involved in the process of remodelling and reshaping. This paves way for future studies involving larger sample size including various groups of population for better correlation of age and gender to confirm the results conclusively. This study is a frontrunner to initiate further research in this field.